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| 09/970,455 | 10/03/2001 | Michael H. Benjamin | FCC-001 | 9639 |
| 34051 | 7590 | 08/18/2006 | EXAMINER | |
| STEVENS LAW GROUP | | | STERRETT, JONATHAN G | |
| P.O. BOX 1667 | | | ART UNIT | |
| SAN JOSE, CA 95109 | | | PAPER NUMBER | |
| | | | 3623 | |

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|--|--|
| Office Action Summary | Application No. 09/970,455 | Applicant(s) BENJAMIN ET AL. | |
| | Examiner Jonathan G. Sterrett | Art Unit 3623 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,9 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,9 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This **Final Rejection** is responsive to applicant's amendment of May 22, 2006. Currently **Claims 1, 2, 6 and 9** are amended. **Claims 3-5, 7, 8 and 10-18** have been cancelled. **Claims 19-26** have been added. **Claims 1, 2, 6, 9, 19-26** are pending in the application.

Response to Amendment

2. The rejection of Claim 11 under 35 USC 112 2nd and 35 USC 101 is withdrawn due to the cancellation of the claim.

Response to Arguments

3. Applicant's arguments have been fully considered but are not persuasive.

4. The applicant argues the Claims are statutory re USC 101 because they accomplish a practical result of evaluating the performance of a supplier by generating a matrix that rates the service of the suppliers.

The examiner respectfully disagrees.

Independent **Claims 1, 19 and 23** recite the generating of a score that is indicative of a supplier's performance. However generating a score (i.e. a number) that is indicative of something without actually applying the number to accomplish a result fails the useful test within USC 101. As it is currently claimed, the score that is

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generated within the claims is not further used in the claims to, for example, compare the supplier to another supplier (e.g. benchmarking) or to provide a determination, for example, that based on the score, that the supplier meets or exceeds a minimum standard for the suppliers. Therefore, the simple generation of a score (i.e. a number) does not produce a practical result (i.e. has utility).

Finally, although a score is generated, it is not tangible because, for example, there is no limitation cited that the score is displayed or printed. As it is claimed, it could be resident in a computer and not visible (i.e. tangible) at all.

Therefore, since the limitations regarding the score are not useful or tangible, the claims as a whole do not accomplish a practical, tangible result and therefore are not statutory under 35 USC 101.

5. The applicant argues on page 10 that Prasad does not teach (1) a filter constant that weighs a first term that is a product of the performance vector, and the first job attribute vector, to a second term that is the product of the supplier rating matrix.

The examiner respectfully disagrees.

Prasad teaches using vectors to denote which aspect of the supplier is being evaluated (i.e. a first job attribute vector – see page 6 paragraph 1 line 7-9). The intersection of the first job attribute vector and the performance ratings given by individual members provides a supplier rating matrix that includes the individual team scores for how a supplier is evaluated on that particular performance item. Prasad

further teaches using a filter (i.e. a weighting constant – see page 17 para 4) to combine those individual scores together.

6. The applicant argues on page 11 that Prasad does not teach (2) a single number representing the value of a supplier matrix.

The examiner respectfully disagrees.

Prasad teaches providing a single number that is a combination of individual scores on page 17 para 4. The combined score from the team members is a rating of the supplier, where the matrix is all of the individual team member scores for that supplier according to the particular area they are rating the supplier in.

7. The applicant argues on page 11 that Prasad does not teach (3) a job attribute vector including a set of sub-attributes including at least one of a plurality of ranges of tolerance values, a plurality of ranges of quantity values, and a plurality of ranges of times.

The examiner respectfully disagrees.

Prasad teaches using vectors to denote which item a supplier is being rated on (see page 6 paragraph 1 line 7-9). These vectors are used to measure the various aspects of a supplier's performance related to how they would perform in a JIT environment. This metrics include (as would be expected in a Just-In-Time environment) time, i.e. responsiveness, to determine how responsive time-wise, the supplier is evaluated to be.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 1, 2, 6, 9 and 19-26** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In order to be statutory, the claimed invention must produce a useful, concrete, and tangible real-world result. An invention that fails to produce a tangible result is one that involves no more than the manipulation of an abstract idea. In order to be concrete, the result must be substantially repeatable or re-produce the same result. The result is useful when there is a real-world practical application.

Claim 1 recites a series of steps that are adapted to define a job attribute vector, define a performance vector, define a supplier rating matrix, define a filter constant, and generate a supplier rating score by using a weighted average combination of the cited vectors and matrix. These limitations fail on the requirements under 35 USC 101. First, since the steps are not tangibly embodied, they are considered to be an abstract idea. The result of the claimed method does not produce a tangible result, since the result is not, for example, outputted on a display or a report. Finally, there is no real-world practical application recited and the steps are considered to fail the useful test.

Claim 19 recites a software program that are adapted to define a job attribute vector, define a performance vector, define a supplier rating matrix, define a filter constant, and generate a supplier rating score by using a weighted average combination of the cited vectors and matrix. These limitations fail on the requirements

under 35 USC 101. The result of from the software program does not produce a tangible result, since the result is not, for example, outputted on a display or a report. Finally, there is no real-world practical application recited and the steps are considered to fail the useful test.

Claim 23 recites a system executing modules that are adapted to define a job attribute vector, define a plurality of performance metrics and performance vector, define initial values and generate a supplier rating matrix by combining the job attribute and performance vectors. These limitations fail on the requirements under 35 USC 101. The software modules are tangibly embodied, and thus are not considered to be an abstract idea. However, The result from the system does not produce a tangible result, since the result is not, for example, outputted on a display or a report. Finally, there is no real-world practical application recited and the steps are considered to fail the useful test.

Therefore **Claims 1, 19 and 23** are directed towards a non-statutory subject matter. **Claims 2, 6, 9, 20-22 and 24-26** are dependent claims and are therefore not statutory under 35 USC 101 for at least the reasons cited above for **Claims 1, 19 and 23**.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 1, 2, 6, 9, 19-26** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **Claims 1, 19 and 23**, a vector operation is claimed, where a where a “first term” is calculated as a **product** of a first filter constant with a first performance vector and a first job attribute vector. Since it is understood in the art of mathematics that vector operations can include both dot products and cross products, this limitation is indefinite. A dot product is understood as resulting in the two vectors times the cosine of the angle between them. A cross product is understood as resulting in a third vector that is orthogonal to the two vectors. Since the term “product” is used in conjunction with not only two vectors, but also a constant, it is not clear which vector operation is being performed and therefore the claim is indefinite.

For the purposes of examination, the examiner is assuming that although ‘vectors’ are being claimed, that the “product” function being claimed is a simple multiplication of the filter constant times the two vectors (i.e. where the vectors are really functioning as simple table matrices).

The examiner would further point out that the use of the word “term” in conjunction with “vectors” as the result of an operation is also indefinite. It is not clear whether the ‘term’ that results from the vector operation is a single number (i.e. as in the ‘terms’ of an equation, i.e. a singular result) or is another resulting vector. The examiner is assuming, for the purposes of examination that the ‘term’ resulting is another matrix (i.e. a resultant vector).

Claims 2, 6, 9, 20-22 and 24-26 are dependent claims and are therefore not statutory under 35 USC 112 2nd for at least the reasons cited above for **Claims 1, 19 and 23**.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 1, 2, 6, 9, 19-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Prasad**.

Prasad, Biren; "JIT Quality Matrices for strategic planning and implementation", 1995, International Journal of Operations & Production Management, v15n9, pp.116-142.

Regarding **Claim 1** Prasad teaches:

Defining a first job attribute vector, the first job attribute vector including at least one of a plurality of ranges of tolerance values, a plurality of ranges of quantity values and a plurality of ranges of times.

page 6 paragraph 1 line 7-9, the JIT matrix defines various vectors, each vector including a plurality of metrics that define performance according to a plurality of

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dimensions. In paragraph 2 of page 6, machine/job quick set up is delineated as one of the dimensions of the JIT performance vector. On page 11 para 6, time (responsiveness) is one of the factors used in an importance matrix (i.e. an attribute vector).

Defining a first performance vector, the first performance vector including a set of performance metrics;

Page 12 paragraph 7, a first performance vector for evaluating a particular production process is developed using ratings from team members – see also page 12 para 4.

Defining a first supplier rating matrix;

Page 13 para 1, a rating matrix (used for rating the production process of page 12) is developed. Since Prasad is teaching the evaluation of suppliers in a JIT(just in time) context, this is also for production processes of suppliers.

Defining a first filter constant, where in the first filter constant is between 0 and 1;

Page 17 para 4, filter constants to combine the various scores are between 0 and 1.

Calculating a first term, the first term being a product of at least the filter constant, the first performance vector and the first job attribute vector;

Page 17 para 4, the how versus how much table (showing the “how” vector on one side and the “how much” vector on the other (see page 129 of the Prasad PDF reference that illustrates this table). The scores at the intersection are the value of the product of these two vectors. Prasad teaches combining these individual scores using a weighted average scheme. In Prasad’s example 4 different terms are multiplied and added together (page 17 para 4).

Calculating a first weighted average from each element of the second supplier rating matrix, wherein the first weighted average is a first supplier rating score.

Page 13 para 1, the team leader calculates a score using weighted averaging methods of the team members individual scores. The resultant score is a weighted average of JIT’s impact on a particular process (i.e. a first supplier rating score.

Prasad further teaches in page 3 paragraph 5, that using a JIT matrix (and associated vectors) can be used to evaluate specific requirements for evaluating operational performance (page 1 paragraph 2) and that using vectors (as part of the structured methodology to provide JIT performance evaluation (see page 3 paragraph 5).

Prasad further teaches in page 3 paragraph 5, that using a JIT matrix (and associated vectors) can be used to evaluate specific requirements for evaluating

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operational performance (page 1 paragraph 2) and that using vectors (as part of the structured methodology to provide JIT performance evaluation (see page 3 paragraph 5).

Prasad's teaching of using evaluative methods using matrices (i.e. vectors, since a table matrix such as the ones taught by Prasad are vector matrices – note the vector matrix notation used in equation 4 on page 11 (page 132 of the attached PDF version of the Prasad reference).

Prasad teaches using evaluations of various aspects of a production process for how a JIT implementation would impact the process (i.e. including a supplier's process, as to how JIT would impact the external supplier). These evaluations are then combined in a weighted average manner (see page 13 para 1, also see page 17 para 4).

The weightings used to come up with a weighted average scheme must add up to 1, as taught by Prasad (see page 17 para 4 under "Scenario 11"). Prasad teaches here that various scores can be added up based on using a 4 filter factors such that these add up to 1.

Prasad's teachings imply that the weighting scheme uses a filter and a 1-filter approach if just two terms are added together, rather than the 5 discussed in scenario 11 on page 17 (para 4).

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Since Prasad teaches 4 terms being added (page 17 para 11); rather than two, Prasad does not teach:

Calculating a second term, the second term being a product of at least 1 – the first filter constant and the first supplier rating matrix;

Adding the first term to the second term, wherein a second supplier rating matrix is created;

However it is old and well known in the art for two factors to be used in evaluation of a supplier, as taught by Prasad (e.g. cost and quality from the 5 factors taught in Prasad's "time, cost, quality, flexibility, and customer satisfaction"). Prasad teaches on page 16 paragraph 2 that factors are chosen in evaluation that are relevant to the well being of a company. This teaching includes that any number of factors can be chosen, including only two.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Prasad, regarding generating a supplier rating matrix score using a weighted average approach, to include the step of using two factors that are combined in a weighted average approach, because it would provide an evaluation that is relevant to the well-being of a company.

Regarding **Claim 2**, Prasad teaches all of the limitations above except for using the matrix-vector technique to provide for the evaluation of a second supplier to develop a second supplier rating score.

Prasad teaches that his technique of using matrices and vectors can be used to provide for evaluation of a supplier, as discussed above, and teaches using the evaluations as a basis for selecting a supplier based on the rating the supplier receives from the evaluation. Prasad teaches using his techniques for supplier development and rationalization, see page 7 paragraphs 2 and 5. Rationalization in this context is understood by the examiner to mean the selection of a supplier for a particular job. Rationalization in JIT as a production methodology is necessary because of the close customer-supplier link inherently required by the concept of 'just-in-time'. Thus the development of a second supplier evaluation score is taught by Prasad as a means for selecting a supplier.

Regarding **Claim 6**, Prasad teaches:

defining the attributes and the plurality of sub attributes using a technical requirements specification of a customer of a supplier.

Page 7 paragraph 1, machine capabilities to maximize resource allocation in a manufacturing environment would require knowing the capabilities of the equipment versus the specification of a customer, to ensure that quality standards were met. Also

see page 7 paragraph 10, the corrective action in the context of SPC here requires knowing if parts exceed customer specifications.

Regarding **Claim 9**, Prasad teaches:

Wherein the set of performance metrics to includes at least one of speed, quality, cost and service.

Page 7 paragraph 9, lead time reductions would include a plurality of ranges of times and would include the speed of the lead time.

Page 7 paragraph 1 and 10, the use of control charts in the matrix includes quality. The performance metrics also include multi-machine/multi-process handling (i.e. service). Also, the implementation of JIT as a system implies a high level of service since output and delivery is "just in time".

Page 1 paragraph 2, requirements associated with manufacturing system design include cost and quality.

Claims 19-26 recite limitations similar to those addressed in the rejection of **Claims 1, 2, 6 and 9** above, and are therefore rejected under the same rationale.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

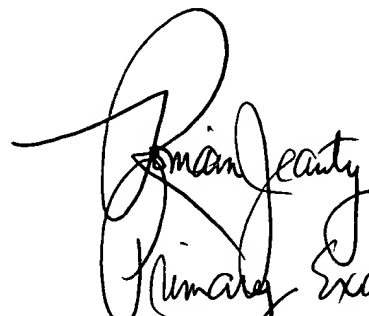
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JG

JGS 7-27-2006


Roman Leaty
Primary Examiner
Art Unit 3623